International Workshop on Water Logging and Salinity

3367. SHRI KRISHNA KUMAR BIRLA:
SHRI NANA DESHMUKH:

Will the Minister of WATER RESOURCES be pleased to state:

(a) whether at an International Seminar held recently in New Delhi and attended to by 17 countries a view was expressed that it was necessary to adopt a holistic approach towards water usage, integrated drainage, flood control and water management in irrigation;

(b) if so, the details of experts attended the workshop and outcome of discussions held in the workshop;

(c) whether Government propose to take any further steps on the basis of outcome of the discussions; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SHRIMATI BIJOYA CHAKRAVARTY): (a) and (b) Yes Sir, a five day 8th International Drainage Workshop of International Commission on Irrigation and Drainage (ICID) was held between 31st January to 4th February, 2000 at Vigyan Bhawan, New Delhi. The main theme of the workshop was "Role of Drainage and Challenges in 21st Century".

32 foreign delegates from various countries namely Australia, Bangladesh, Canada, Egypt, Ethiopia, France, Great-Britain (U.K.), Indonesia, Italy, Japan, Netherlands, Pakistan, Philippines, Russia, U.S.A, Ujbekistan and 334 Indian delegates attended the workshop.

The recommendations of the Workshop are given in the statement, (*see* below).

(c) and (d) The recommendations issued at the end of the 8th ICID International Drainage Workshop have been circulated to all concerned and at the State Governments for necessary follow up action.

Statement

Recommendations of the 8th ICID International Drainage Workshop held during 31st January to 4th February, 2000

1. All Irrigation projects can be referred to as irrigation and drainage projects. An inter-disciplinary and integrated approach be insisted upon for all irrigation and drainage projects.

2. The data on water logging and salinity is not adequate and is out dated. There is a need to update the information using latest techniques like remote sensing and present it in form of a Relational Data Base Management (RDBM) using Geographic Information System (GIS). Simulation modelling aided by crucial field observations would help in formulating data collection programmes as also in planning and designing.

3. Sub-Surface drainage projects, in general improve environments in the area serviced by them, but can also cause some undesirable impacts particularly in the downstream. Preparing environmental management plan and close monitoring are necessary.

4. In deltaic and tidal zones, integration of flood control, drainage and water management is necessary in view of the complex interactions.

5. Reuse of drainage waters wherever it is feasible needs to be encouraged.

6. A comprehensive integrated and multi-disciplinary planning for disposal of large quantity of saline water effluents after reclaiming water-logged areas is necessary. Regional cooperation needs to be available for the purpose.

7. Technologies for on-farm reuse of drainage effluents in monsoonal climate are available and can be used with reasonable succession a medium time scale. There is however, need to assess the long term impacts of reuse on soil health through simulation/modelling.

8. Generic options for reuse and disposal at regional scale are known but have not been tested. Optimal mix of disposal technologies on regional scale need to be decided.

9. Bio-drainage could hold promising possibilities in controlling groundwater levels. Further research on bio-drainage and its impact on salt balance is needed.

10. Involvement of end-users i.e. farmers, in formulation of schemes to create a sense of belonging among the farmers. Active involvement of women in planning and decision-making processes. Farmers may be involved in the monitoring of the water taxble for which simple devices could be suggested and may also be involved in the planning of drainage schemes right from formulation stage of the irrigation or multi-purpose projects.

11. The Institutional mechanism for participatory irrigation and drainage management could perhaps be combined. However, institutional models in this regard are not available, and documentation of experience is necessary.

12. Research need to be carried out in two stages *viz.* to establish a relationship between (a) drainage *vis-a-vis* soil status and (b) soil status *vs* crop yields.

13. Utilisation of remote sensing techniques and mathematical modelling facilities with the available data is necessary to enable effective design of drainage systems.

14. Human Resources Development strategies should also take into account (a) motivation and (b) training programmes as per the requirements.

15. Drainage technologies, needs to be included in the curriculum at under graduate level and also in the in-service training programmes.

16. Instruments and devices for rapid measurements of salinity, by techniques such as electro-magnetic induction seem to hold considerable promise. The EM-38 instruments were discussed in this context. Networking amongst researchers developing applications of such devices is recommended.